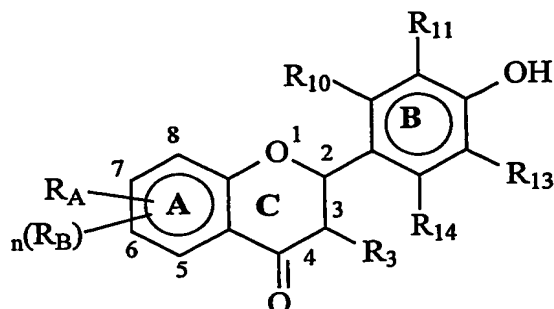


1     **Claims**

2

3     1.     A compound of the following Formula 1:



4

5

6

wherein

7

RA is a C<sub>2</sub> to C<sub>30</sub> saturated or unsaturated  
hydrocarbon chain;

8

9

R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>3</sub> each independently  
represent H, OH, a C<sub>1-6</sub> ether, or a saturated or  
unsaturated hydrocarbon chain which may be  
substituted with one or more of nitro, halogen,  
amino, hydroxyl, ketone or aldehyde group;

14

15

optionally there is a double bond between C<sub>2</sub> and  
C<sub>3</sub> of the C ring;

17

18

n represents 0 or 1; and

19

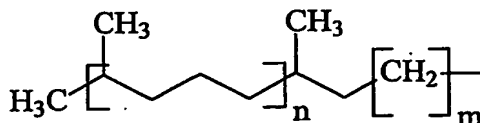
20

R<sub>B</sub> is a C<sub>2</sub> to C<sub>15</sub> saturated or unsaturated  
hydrocarbon chain, and where R<sub>B</sub> is present, R<sub>A</sub>  
and R<sub>B</sub> are both C<sub>2</sub> to C<sub>12</sub> aliphatic alkyl  
chains.

24

25

- 1      2.    The compound as claimed in Claim 1 wherein at  
2            least one of  $R_{10}$ ,  $R_{11}$  and  $R_{13}$  represents OH.  
3
- 4      3.    The compound as claimed in Claim 2 wherein  $R_{10}$   
5            and/or  $R_{11}$  represents OH.  
6
- 7      4.    The compound as claimed in any one of Claims 1  
8            to 3 wherein  $R_3$ ,  $R_{11}$  and  $R_{13}$  all represent OH.  
9
- 10     5.    The compound as claimed in any one of Claims 1  
11           to 3 wherein  $R_3$ ,  $R_{10}$  and  $R_{13}$  all represent OH.  
12
- 13     6.    The compound as claimed in any one of Claims 1  
14           to 5 wherein there is a double bond between  $C_2$   
15           and  $C_3$  of the C ring.  
16
- 17     7.    The compound as claimed in any one of Claims 1  
18           to 6 where the backbone of  $R_A$  has eight, nine  
19           or ten carbon atoms.  
20
- 21     8.    The compound as claimed in any one of Claims 1  
22           to 7 where  $R_A$  is attached to position 7 of the  
23           A ring of the flavonoid group.  
24
- 25     9.    The compound as claimed in any one of Claims 1  
26           to 8 wherein  $R_A$  has the following structure:



27

28

wherein

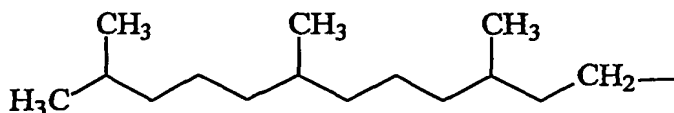
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n is an integer from 1 to 7; and

1 m is an integer from 1 to 7.

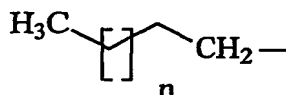
2

3 10. The compound as claimed in any one of Claims 1  
4 to 8 wherein  $R_A$  has the following structure:



5

6 11. The compound as claimed in any one of Claims 1  
7 to 8 wherein  $R_A$  has the following structure:

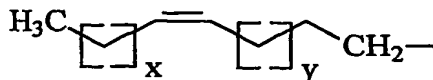


8

9 wherein n is an integer from 2 to 27.

10

11 12. The compound as claimed in any one of Claims 1  
12 to 8 wherein  $R_A$  has the following structure:



13

14 wherein

15 x is an integer from 1 to 25;

16

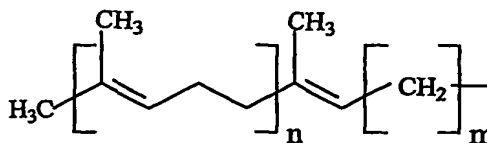
17 y is an integer from 1 to 25;

18

19 and wherein  $x + y = 25$  or less.

20

21 13. The compound as claimed in any one of Claims 1  
22 to 12 wherein  $R_A$  has the following structure:

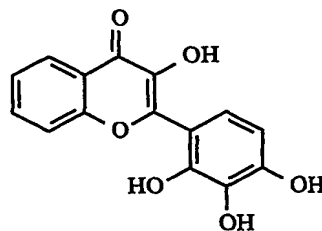
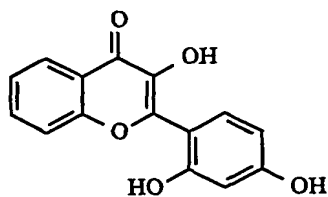
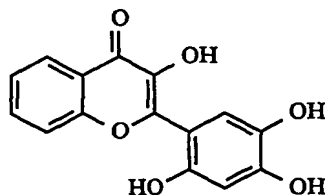
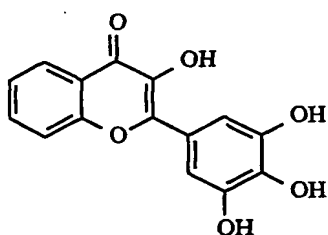


wherein

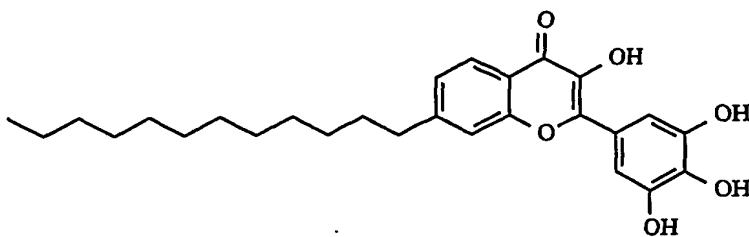
n is an integer from 1 to 7; and

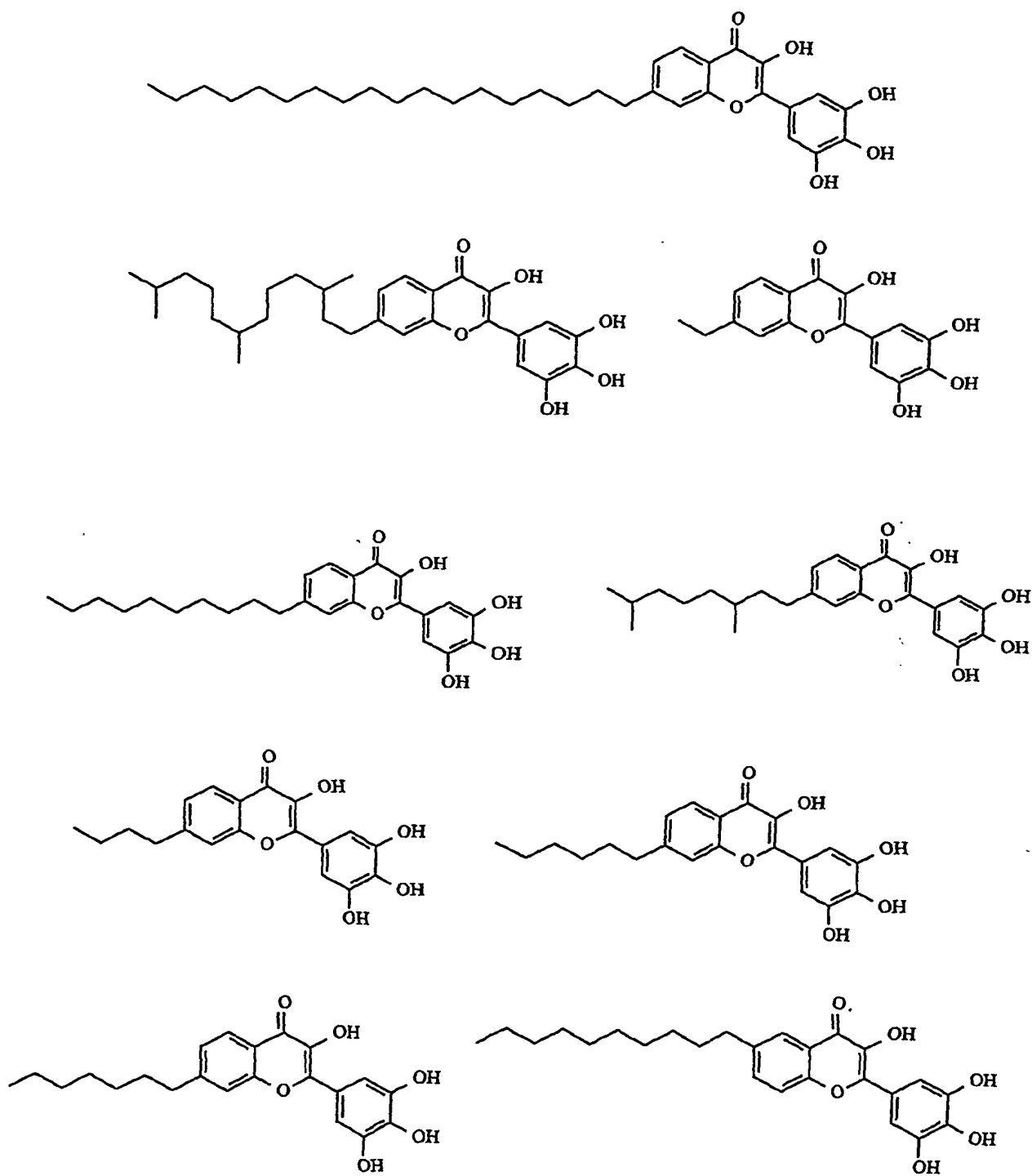
m is an integer from 1 to 7.

14. The compound as claimed in any one of Claims 1 to 13 wherein the flavonoid group has one of the following structures:

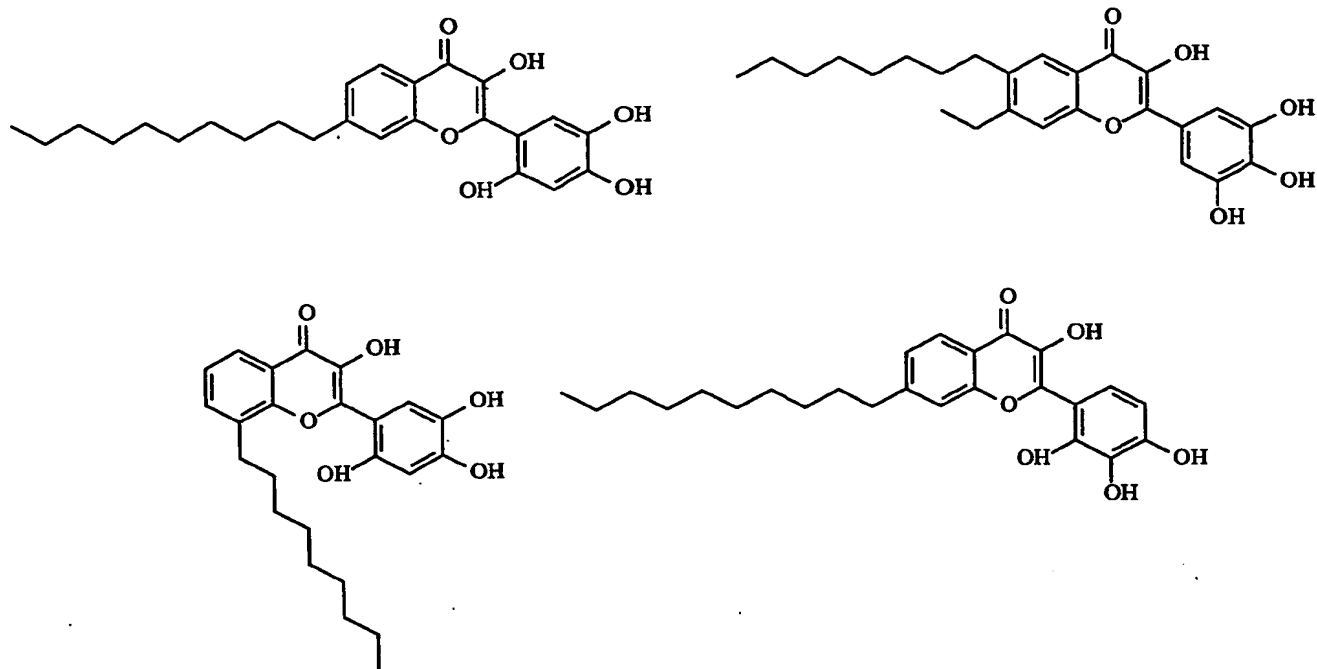


15. The compound as claimed in any one of Claims 1 to 14 having one of the following structures:





136



- 1 16. A composition comprising a compound as claimed
- 2 in any one of Claims 1 to 15 and at least one
- 3 pharmaceutical excipient or carrier.
- 4
- 5 17. The composition as claimed in Claim 16 which is
- 6 a sunscreen.
- 7
- 8 18. A method of preventing UV damage to the skin of
- 9 a mammalian animal, said method comprising
- 10 administering a therapeutically effective
- 11 amount of the composition of Claim 17 to said
- 12 skin prior to UV exposure.
- 13
- 14 19. The method as claimed in Claim 18 wherein said
- 15 mammalian animal is a human.

- 1 20. The method as claimed in either one of Claims  
2 18 and 19 wherein said composition is applied  
3 topically to said skin.  
4
- 5 21. The composition as claimed in Claim 16 which is  
6 a skincare composition.  
7
- 8 22. The composition as claimed in Claim 21 further  
9 containing emollients and moisturisers.  
10
- 11 23. The composition as claimed in either one of  
12 Claims 21 and 22 for preventing or reversing  
13 the effects of ageing, of reducing apparent  
14 wrinkling and/or treating or preventing dry  
15 skin.  
16
- 17 24. A foodstuff stabiliser composition comprising a  
18 compound as claimed in any one of Claims 1 to  
19 15.  
20
- 21 25. The composition as claimed in Claim 24 in the  
22 form of an emulsion having a low fat:high water  
23 content.  
24
- 25 26. A method of treating a patient having a disease  
26 or disorder involving oxidative damage, said  
27 method comprising the step of administering a  
28 therapeutically effective amount of the  
29 composition of Claim 16 to said patient.  
30

- 1 27. The method as claimed in Claim 26 wherein said  
2 patient is a human.  
3
- 4 28. The method as claimed in either one of Claims  
5 26 and 27 wherein the disease or disorder  
6 involving oxidative damage is selected from the  
7 group consisting of cancer, heart disease,  
8 neurological disorders, auto-immune disorders,  
9 ischaemia-reperfusion injury, diabetic  
10 complications, septic shock, hepatitis,  
11 atherosclerosis and complications arising from  
12 HIV or Hepatitis B.  
13
- 14 29. The method as claimed in Claim 28 wherein the  
15 disease or disorder is an ischaemia-reperfusion  
16 injury or Alzheimer's disease.  
17
- 18 30. A prophylactic method of treatment to prevent  
19 or reduce the severity of a disease or disorder  
20 involving oxidative damage in the tissues of a  
21 patient, said method comprising the step of  
22 administering a therapeutically effective  
23 amount of the composition of Claim 16 to said  
24 patient.  
25
- 26 31. The method as claimed in Claim 30 wherein said  
27 patient is a human.  
28
- 29 32. The method as claimed is either one of Claims  
30 30 and 31 wherein the disease or disorder  
31 involving oxidative damage is selected from the



1 group consisting of cancer, heart disease,  
2 neurological disorders, auto-immune disorders,  
3 ischaemia-reperfusion injury, diabetic  
4 complications, septic shock, hepatitis,  
5 atherosclerosis and complications arising from  
6 HIV or Hepatitis B.

7

8 33. The method as claimed in Claim 32 wherein the  
9 disease or disorder is an ischaemia-reperfusion  
10 injury or Alzheimer's disease.

11

12 34. The use of a compound of Formula 1 as claimed  
13 in any one of Claims 1 to 15 for the  
14 manufacture of a medicament for the treatment  
15 of a disease or disorder involving oxidative  
16 damage.

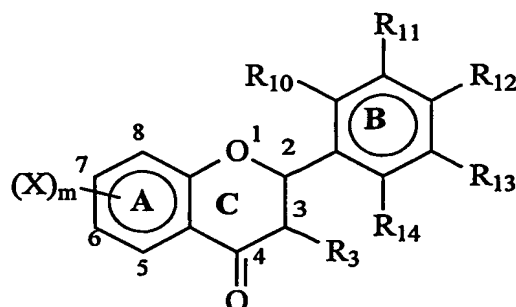
17

18 35. The use as claimed in Claim 34 wherein the  
19 disease or disorder is cancer, heart disease,  
20 neurological disorders, auto-immune disorders,  
21 ischaemia-reperfusion injury, diabetic  
22 complications, septic shock, hepatitis,  
23 atherosclerosis, and complications arising from  
24 an immune response to HIV or Hepatitis B.

25

26 36. A method of manufacturing a compound of Formula  
27 1 as claimed in any one of Claims 1 to 15, said  
28 method comprising providing an intermediate  
29 compound A and an intermediate compound B,  
30 wherein intermediate compound A has the  
31 structure  $R_A M$  wherein M is a metal or metalloid

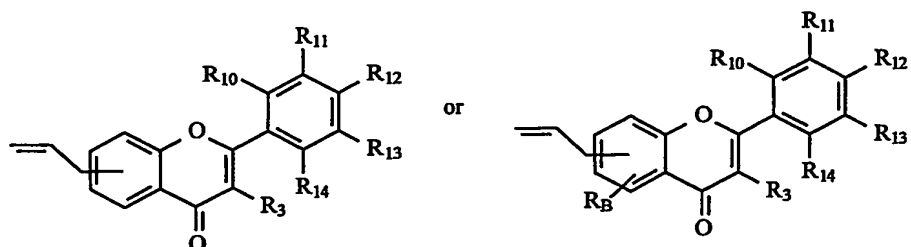
1 group where the metal is directly attached to  
 2  $R_A$ , and  $R_A$  is a  $C_2$  to  $C_{30}$  saturated or  
 3 unsaturated alkyl chain, and  $R_{AM}$  is capable of  
 4 participating in transition metal catalysed  
 5 cross-coupling reactions;  
 6 and intermediate compound B has the following  
 7 structure:



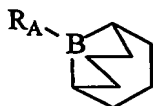
8 wherein  
 9  $R_{12}$  represents OH or an O-protecting group  
 10  $R_3$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{13}$ , and  $R_{14}$  each independently  
 11 represent H, OH,  $C_1$  to  $C_4$  aliphatic alkyl group  
 12 or an O-protecting group where required, and  
 13 optionally there is a double bond between  $C_2$   
 14 and  $C_3$  of the C ring;  
 15 X is a halogen, O-trifluoromethane sulphonate  
 16 or any other group used in cross-coupling  
 17 reactions; and  
 18  $m = 1$  or  $2$ ,  
 19  
 20 and reacting intermediate compound A with  
 21 intermediate compound B by transition metal  
 22 catalysed cross-coupling reactions and  
 23 subsequently deprotecting at least one OH  
 24 group.

25

- 1 37. A method as claimed in Claim 36 wherein  $R_A M$  is  
 2 an organomagnesium, organozinc, organoboron or  
 3 organotin compound.  
 4
- 5 38. The method as claimed in either one of Claims  
 6 36 and 37 wherein the catalyst is a palladium,  
 7 nickel or iron complex.  
 8
- 9 39. A method of manufacturing a compound of Formula  
 10 1 as claimed in any one of Claims 1 to 15, said  
 11 method comprising providing an intermediate  
 12 Compound C and an intermediate Compound D,  
 13 wherein said intermediate Compound C has the  
 14 structure  $R_A CHCHR$  wherein  $R_A$  is as defined in  
 15 Formula 1, and wherein intermediate Compound D  
 16 has a structure:

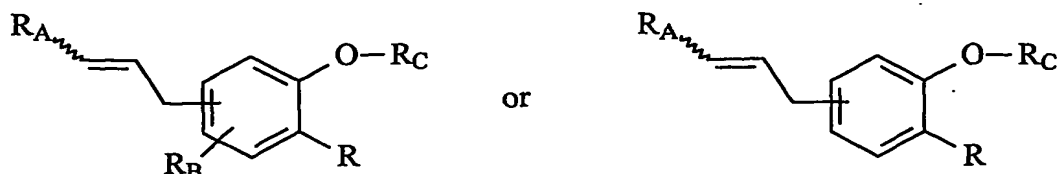


- 17  
 18
- 19 40. The method as claimed in Claim 39 wherein the  
 20 catalyst is:



21  
 22  
 23

- 1 41. A method of manufacturing a compound of Formula  
2 1 as claimed in any one of Claims 1 to 15, said  
3 method comprising providing an intermediate  
4 Compound E of formula:



- 7 and constructing a flavonol core on said  
8 intermediate Compound E.
- 9
- 10 42. The method as claimed in Claim 41 wherein said  
11 flavonol core is formed by Algar-Flynn-Oyamada  
12 (AFO) oxidation.
- 13
- 14 43. The method as claimed in Claim 41 wherein said  
15 flavanol core is formed by Baker-Verkataraman  
16 rearrangement.
- 17
- 18 44. The method as claimed in any one of Claims 40  
19 to 43 wherein said intermediate Compound E is  
20 formed by a transition metal catalysed cross-  
21 coupling reaction.
- 22
- 23 45. The method as claimed in any one of Claims 40  
24 to 43 wherein said intermediate Compound E is  
25 formed by alkene cross-metathesis.